

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number
WO 2005/094690 A1

(51) International Patent Classification⁷: **A61B 8/12,**
G10K 11/00

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(21) International Application Number:
PCT/IB2005/050985

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(22) International Filing Date: 22 March 2005 (22.03.2005)

(25) Filing Language: English

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
60/559,379 2 April 2004 (02.04.2004) US

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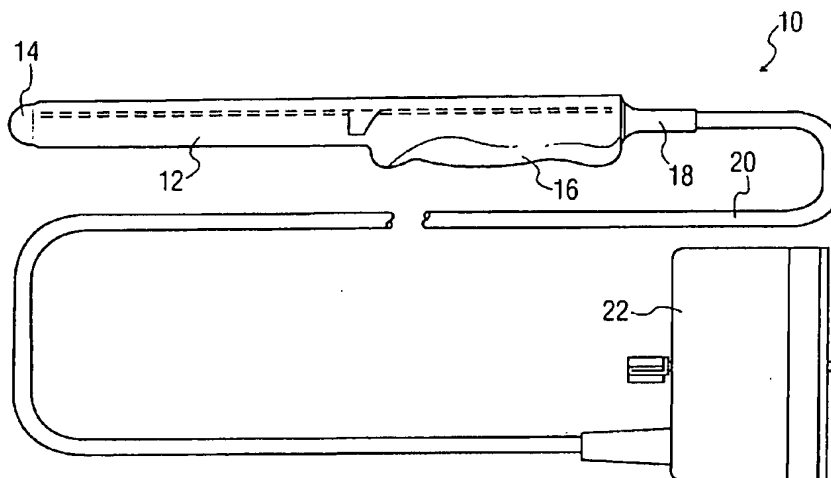
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(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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(54) Title: ULTRASONIC PROBE VOLUME COMPENSATION SYSTEM



(57) **Abstract:** An ultrasound probe includes a transducer which is pivotally mounted inside a fluid chamber for scanning a region outside the probe as the transducer is oscillated. A volume compensation balloon is attached to the fluid chamber and is partially filled with acoustic fluid at nominal (room) temperatures. The balloon is made of a high performance thermoplastic which enables the balloon to have a very thin wall. The thin wall is highly compliant as the volume of the fluid inside the balloon changes, and remains so at low temperatures of transport and use. The thin wall exhibits a low permeability to the acoustic fluid. The balloon is formed of a non elastic material and exhibits good thermal stability and high burst strength.

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